Remarks

Claims 38-42, 49, 81-90, 98 and 99 are currently pending in this application. Applicant has canceled claims 1-20, 23-37, and 50-80, Applicant has amended claims 38, 49, 81 and 84, and new claim 100 has been added. No new matter is added by virtue of the amendments contained herein. Support for the amendments lies in the claims and specification as filed. Applicants responds fully to each of Examiner's rejections as follows.

I. Information Disclosure Statement.

The Examiner objected to the submission of the abstract of Canadian application 2359180, equivalent of EP1144623, which contains an English language abstract of the invention as an English language summary of EP1144623. Applicants respectfully traverse the objection.

The prior submission was made as a submission of an English language abstract of EP1144623, which had been objected to by the Examiner in a prior Office Action. Applicants submit that the prior submission, in conjunction with the English translation claims also submitted, was in accordance with such requirement and consideration by the Examiner of EP1144623 is requested. The Canadian publication is duplicative of the EP publication submitted previously. However, in an effort to address the Examiner's concern, a new form 8A is submitted herewith referencing the Canadian application. Consideration of EP1144623 and CA2359180 is respectfully requested.

II. Rejection under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Claims 38-42, 49, 84-90, 98 and 99 stand rejected by the Examiner under 35 U.S.C. § 112, first paragraph, for lack of written description. Applicants respectfully traverse this rejection.

Applicants have amended the claims herein without disclaimer, waiver or prejudice. Solely in an effort to advance prosecution, Applicants amend claims 38, 49, and 84 to recite methods of inhibiting or treating influenza or a condition associated with influenza virus infection. Applicants appreciate the Examiner's acknowledgement on page 4 of the Office Action that the instant specification is considered to provide adequate description for methods of inhibiting influenza virus using such siRNA/cationic complexes. In view of the Examiner's

comments, it is believed the present amendments render the rejection under 35 USC §112 moot. Applicants therefore respectfully request reconsideration and withdrawal of this rejection.

III. Rejection under 35 U.S.C. § 102(e).

Caims 38-42, 49, 81-90, 98 and 99 were rejected by the Examiner under 35 U.S.C. § 102(e) as being anticipated by Biegelman *et al.* (U.S. Patent Publication 2003/0148928). The Examiner states that Biegelman teaches methods of inhibiting a transcript associated with a respiratory disorder, methods of preventing or treating a respiratory disease associated with overexpression or inappropriate expression of any transcript, comprising administering an siRNA in combination with a cationic polymer. Applicant disagrees with the present rejection.

Applicant respectfully asserts that Biegelman does not describe "cationic *polymers*," as stated by the Examiner (Office Action, page 6), but instead describes "cationic *lipids*" (page 5, paragraph 50). Applicant thanks the Examiner and his Supervisor for a telephone conference on October 10, 2006 regarding this case at which the present rejection was discussed. During the telephone interview, the Examiner stated that the "cationic lipids" of Biegelman were the same as the "cationic polymers" of the present invention. Applicant respectfully disagrees with this assertion and maintains that, while a *portion* of a lipid molecule may have a *polymeric character* (a polymeric tail), a lipid molecule as a whole is not "a polymer."

Indeed, every dictionary provides essentially the same definition for "polymer." *Merriam-Webster's Medical Dictionary* (2002) defines "polymer" as "a chemical compound or mixture of compounds formed by polymerization and consisting essentially of repeating structural units." According to the *American Heritage Dictionary* (2000), a "polymer" is defined as "any of numerous natural and synthetic compounds of usually high molecular weight consisting of up to millions of repeated linked units, each a relatively light and simple molecule." According to *WordNet* (2003, Princeton University), a "polymer" is "a naturally occurring or synthetic compound consisting of large molecules made up of a linked series of repeated simple monomers." Finally, the *Compact Oxford English Dictionary* (2005) defines "polymer" as "a substance with a molecular structure formed from many identical small molecules bonded together." According to every available definition, the defining feature of a "polymer" is that it is made of more than one identical *monomer* joined together to form a larger molecule. Therefore, if the Examiner maintains his position that a "cationic lipid" as disclosed by

Biegelman is a "cationic polymer," Applicant respectfully requests that the Examiner identify the monomeric entity that is represented in the Biegelman "polymer." Applicant submits that, according to the definition of "polymer," a polymer of lipids would consist of multiple, whole lipid monomers bonded together to form a chain of individual, whole lipid monomers. However, such an entity is *not* disclosed by Biegelman. In contrast, the "cationic polymers" of the present invention *do* consist of multiple, identical monomer units bonded together to form a chain of identical monomers. Applicant, therefore, maintains that the "cationic lipid" of Biegelman does not anticipate the "cationic polymer" of the present invention.

Furthermore, the present specification implicitly defines a "lipid" as an entity that is different from a "polymer." The description of possible carrier substances includes a list of options for the composition of the carrier substance (page 33, lines 26-32; and page 34, lines 7-17). In this list, "cationic polymers" are listed as one type of carrier substance, and "lipids" are mentioned as a different type of carrier substance. Furthermore, "cationic polymers" are described in a separate section of the specification from the description of "lipids" (page 34, line 29-page 40, line 3), and nowhere in the description of "cationic polymers" is there any reference or allusion to a lipid. Therefore, it is implicit in the specification that the "cationic polymers" of the present invention are *not* "lipids."

Considering that neither dictionaries, the Patent Office, nor the present specification define "polymers" as "lipids," Applicant respectfully submits that the "cationic lipids" of Biegelman do not anticipate "cationic polymers" of the present invention. Applicant, therefore, requests that the rejection be removed.

Furthermore, Biegelman teaches compositions and methods of use of enzymatic nucleic acid-peptide *conjugate* molecules. Biegelman does not teach or suggest a method of inhibiting a respiratory disorder or a method of treating or preventing a respiratory disease or clinical condition associated with a influenza virus infection, by

> delivering a composition comprising i) an RNAi-inducing entity and ii) a delivery agent selected from the group consisting of cationic polymers and modified cationic polymers to the respiratory system of a subject by introducing the composition into the vascular system of the subject;
>
> wherein the RNAi-inducing entity is a nucleic acid selected from an siRNA, an shRNA, and an RNAi-inducing vector whose presence within a cell results in production of an siRNA or shRNA; wherein the siRNA, shRNA or the siRNA or shRNA produced as a result of vector presence comprises a sequence

that is complementary to a target transcript; and wherein the siRNA or shRNA; wherein the siRNA, shRNA or the siRNA or shRNA produced as a result of vector presence is at least 15 nucleotides in length.

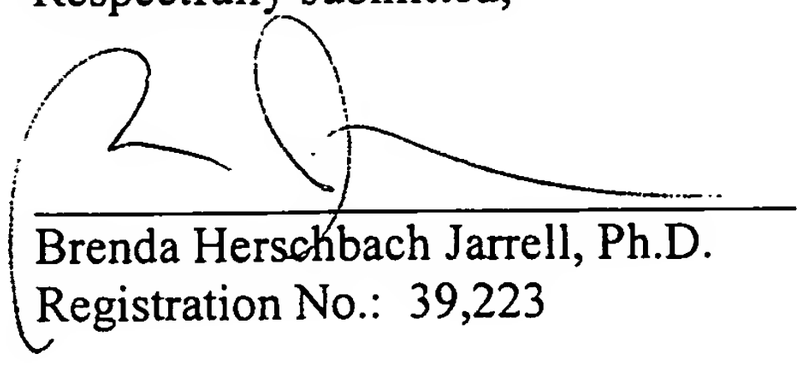
Because Biegelman teaches only use of a chimeric peptide-nucleic acid composition and not delivery of an non-chimeric siRNA inducing entity, Biegelman does not teach the necessary elements of the claims as currently amended. Indeed, Biegelman clearly *requires* a peptide conjugate in which the nucleic acid moiety is covalently linked to a peptide by a disulfide bond. Therefore, solely in order to further prosecution, Applicant has added new claim 100, which utilizes the closed claim language "consists of" to specify that the RNAi inducing entity of the present invention is not a conjugate. Therefore, Applicant submits that Biegelman cannot serve as an anticipatory reference with respect at least to claim 100, and indeed with respect to all claims. Applicant respectfully requests the Examiner withdraw the rejection of the claims under 35 USC §102.

Applicant, therefore, respectfully submits that the present case is in condition for allowance. A Notice to that effect is respectfully requested.

If, at any time, it appears that a phone discussion would be helpful, the undersigned would greatly appreciate the opportunity to discuss such issues at the Examiner's convenience. The undersigned can be contacted at (617) 248-5175.

Please charge any fees that may be required for the processing of this Response, or credit any overpayments, to our Deposit Account No. 03-1721.

Respectfully submitted,



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